

ELECTRICAL CAPACITANCE SAPPHIRE DIAPHRAGM PRESSURE
SENSOR AND A METHOD OF FABRICATING THE SAME

ABSTRACT OF THE DISCLOSURE

There is provided a highly accurate electrical
5 capacitance diaphragm pressure sensor capable of reducing
temperature drift that arises when a pressure-travel
coefficient changes with temperature variations of a fluid
whose pressure is sensed. A sapphire diaphragm pressure
sensor, in which sapphire diaphragms are arranged in
10 opposing relation, comprises a pressure sensing element (10,
30) having a pressure receiving part (10A, 30A) with a
deposition electrode formed on each of the opposing faces
of sapphire diaphragms which are provided in opposing
relation to each other and a securing part with a metal
15 deposited on a part of each of the surfaces of the sapphire
diaphragms, and further comprises a metal base (11, 31) for
securing the pressure sensing element at the securing part
of the pressure sensing element, a conductive sealing agent
(13, 33) for sealing a gap between the securing part on
20 which a metal is deposited and said metal base, and a
nickel protective layer (14, 34) for protecting at least
said conductive sealing agent from a medium whose pressure
is to be measured.